International Journal of Psychology

International Journal of Psychology, 2019
Vol. 54, No. 3, 325–332, DOI: 10.1002/ijop.12474

Chinese adolescents with higher social dominance orientation are less prosocial and less happy: A value-environment fit analysis

Ying Yang[1], Wenqi Li[1], Kennon M. Sheldon[2,3], and Yu Kou[1]

[1]Beijing Key Laboratory of Applied Experimental Psychology, National Demonstration Center for Experimental Psychology Education (Beijing Normal University), Institute of Developmental Psychology, Beijing Normal University, Beijing, China
[2]Department of Psychological Sciences, University of Missouri, Columbia, MO, USA
[3]International Laboratory of Positive Psychology of Personality and Motivation, National Research University Higher School of Economics, Moscow, Russia

This study aims to investigate the relationship between social dominance orientation (SDO) and subjective well-being among Chinese adolescents ($N = 4246$), and to examine the mediating role of prosocial behaviour in this relationship. The structural equation model's results showed that SDO was negatively associated with prosocial behaviour and subjective well-being, that prosocial behaviour was positively associated with subjective well-being, and also that (low) prosocial behaviour partially mediated the negative relationship between SDO and subjective well-being. Multi-group analyses showed that the mediation model was generally similar between boys and girls, but that the negative relationship between SDO and prosocial behaviour was somewhat stronger among girls than boys. This study sheds light on how SDO is associated with positive outcomes among Chinese adolescents and highlights the mediating role of prosocial behaviour as an underlying mechanism between SDO and subjective well-being. Future studies are needed to further discover the role of culture values in the association between SDO and subjective well-being.

Keywords: Social dominance orientation; Prosocial behaviour; Subjective well-being; Chinese adolescents.

Human society is structured by different social groups, but people hold different attitudes towards the intergroup relations. Social dominance orientation (SDO) captures the extent to which one prefers intergroup relations to be hierarchical rather than equal (Pratto, Sidanius, Stallworth, & Malle, 1994). People high in SDO desire both intergroup hierarchy and interpersonal dominance. As a personality trait, SDO reflects a basic ruthlessness and a view of the world as a competitive, dog–eat–dog environment of winners and losers (Duckitt & Sibley, 2010). Substantive research has demonstrated that such a competitive worldview widely influences individual's social attitudes and behaviours, such as hostile sexism and intergroup discrimination (e.g., Nicol & Rounding, 2013; Pratto et al., 1994).

Despite this abundant research, several important gaps in SDO literature remain. First, whereas studies have consistently shown a negative impact of social dominance upon intergroup functioning and group well-being, it is still unclear how SDO relates to individual subjective well-being, which is generally defined as a global evaluation of life satisfaction, and positive versus negative affective reactions to one's life (Diener, 1984). In a recent meta-analysis, Onraet, Van Hiel, and Dhont (2013) observed weak and non-significant associations between SDO and well-being indicators. However, because the studies included in the meta-analysis were mainly conducted on Western samples, little is known about how SDO would be associated with subjective well-being in Asian or collectivist samples. Second, the existing studies examining SDO and well-being have predominately focused on college or adult populations, but research on adolescents is relatively rare. Given the increasing importance of peer-group relations within adolescence, and the

Correspondence should be addressed to should be addressed to Yu Kou, Beijing Key Laboratory of Applied Experimental Psychology, National Demonstration Center for Experimental Psychology Education (Beijing Normal University), Institute of Developmental Psychology, Beijing Normal University, 19 Xinjiekouwai Street, Haidian District, Beijing 100875, People's Republic of China. E-mail: yu_kou1@163.com.

© 2018 International Union of Psychological Science

dramatic social-cognitive changes that follow (Wölfer, Schmid, Hewstone, & van Zalk, 2016), it should be fruitful to explore the association at this critical period. Moreover, the few studies based on adolescents have mainly focused on the negative intergroup consequences of SDO (e.g., prejudice) (Duriez, Vansteenkiste, Soenens, & De Witte, 2007). Again, limited attention has been devoted to exploring the relationship between SDO and positive outcomes, such as prosocial behaviour and subjective well-being, and this is true as well for research on adolescents. We attempted to address these gaps by examining how SDO is related to prosocial behaviour and subjective well-being in Chinese adolescents. To our knowledge, no such sample has yet been examined within the SDO literature.

SDO and subjective well-being

It may seem paradoxical that SDO is not clearly related to ill-being according to the meta-analysis of past research (Onraet et al., 2013), given that the competitive worldview of SDO makes the motivational goals of power, dominance and superiority over others chronically salient for individuals (Duckitt & Sibley, 2010), and given that these goals are conceptually similar to the "extrinsic" goals of money, status, and appearance (Deci & Ryan, 2000) and to the "egosystem" goals of Crocker (2008). The pursuit of extrinsic and egosystem goals has been shown to undermine subjective well-being because such goal pursuits do not satisfy basic psychological needs for communion with others and connection with larger meaning systems (Crocker, 2008; Deci & Ryan, 2000). However, the finding that SDO is unrelated to subjective well-being makes sense if we consider the culture in which the majority of participants have been embedded: western ones (i.e., cultures in which individual ambition at the expense of others is normative). In contrast, in more collectivist cultural matrices, which place a higher priority on harmony and cooperation (Oyserman, Coon, & Kemmelmeier, 2002), SDO may exert a more clearly negative effect on subjective well-being. In short, collectivists who believe others should be dominated for personal wining may be greater "misfits" within their societies, which might cause greater distress and ill-being for them.

This assumption draws from value-environment fit theory, which says that the relationship between values and subjective well-being depends on the match between people's value orientation and the type of values that are emphasised within their environments (Sagiv & Schwartz, 2000). The power value, among 10 basic values, expresses the motivation to attain power, authority, dominance and control over people and resources (Sagiv & Schwartz, 2000), which is conceptually in line with SDO. Research has shown that power value is unhealthy and harmful for individual's subjective well-being, especially when the environment is not supportive of the value (Sagiv & Schwartz, 2000). Chinese culture and the moral educational system highly encourage the spirit of cooperative harmony and egalitarianism (Liang, 2016; Oyserman et al., 2002), whereas orientations achieving a dominant social position and believing in dog–eat–dog competition might be inconsistent with such cooperative culture values. Thus Chinese adolescents with higher SDO might experience lower levels of subjective well-being, since the Chinese cultural environment discourages their emphases on competition and dominance. Accordingly, we postulated that SDO would be negatively related to adolescents' subjective well-being within our sample.

Prosocial behaviour as a mediator between SDO and subjective well-being

What mediating processes can explain the negative relationship between SDO and subjective well-being? The sustainable happiness model posits that individuals' subjective well-being can be affected by the intentional behaviours that they actively engage (Lyubomirsky, Sheldon, & Schkade, 2005). Prosocial behaviour (i.e., action intended to benefit others) has been identified as one of the most effective activities that contribute to individuals' well-being (Lyubomirsky et al., 2005). In addition, a growing body of research has demonstrated that different types (adaptive/maladaptive) of behaviours mediate the relationship between dispositional traits and subjective well-being (e.g., Yang, Li, Fu, & Kou, 2016). For instance, Tian and her colleagues found that prosocial behaviour mediates the association between gratitude and school satisfaction among Chinese students (Tian, Du, & Huebner, 2015). This study intended to examine whether prosocial behaviour could be the underlying mechanism between SDO and adolescents' subjective well-being.

Because of their predisposition to the world as a "competitive jungle", high SDO individuals maintain a stronger competitive-driven motivation for dominance, superiority and power over others, which influences how people perceive and respond to their interpersonal environments (Duckitt & Sibley, 2010). In support of this claim, research shows that high SDO individuals tend to hold self-enhancement values (Duriez et al., 2007) and prefer acting in ways that allow them to achieve high status rather than cooperative harmony (Duckitt & Sibley, 2010). Thus, we expect that individuals high in SDO are less likely to engage in prosocial behaviour. In line with this assumption, numerous empirical studies have revealed that SDO is negatively associated with prosocial traits, such as agreeableness (Duckitt &

© 2018 International Union of Psychological Science

Sibley, 2010), altruism (Pratto et al., 1994) and empathy (Nicol & Rounding, 2013). Moreover, individuals with higher SDO demonstrate less willingness to help others (Halkjelsvik & Rise, 2014) and also perform less donation behaviour (Freeman, Aquino, & McFerran, 2009). Therefore, we proposed that adolescents' SDO would be negatively associated with their prosocial behaviour.

On the other hand, consistent displays of prosocial behaviour are likely beneficial to adolescents' subjective well-being (e.g., Lyubomirsky et al., 2005). Researchers have found that behaving prosocially increases individual's subjective well-being by fulfilling their basic psychological needs, especially their need for relatedness (Jiang, Zeng, Zhang, & Wang, 2016). In addition, the broaden-and-build theory of positive emotions (Fredrickson, 2004) suggests that positive emotions and psychological resources (personal and interpersonal) influence each other in a positive feedback loop, such that prosocial individuals experience an "upward spiral" of positive affect through acting prosocially (Fredrickson, 2004). Also, prosocial behaviour is known to facilitate adolescents' social relationships and social competence (Caprara et al., 2014), which further promote adolescents' subjective well-being. Empirically, higher frequencies of prosocial behaviour are associated with greater life satisfaction (Tian et al., 2015) and subjective well-being (Jiang et al., 2016; Yang et al., 2016). In sum, we proposed that SDO's tendency to reduce prosocial behaviour would explain SDO's negative association with subjective well-being.

This study

This study aims to investigate the relationship between SDO and subjective well-being, and to examine whether prosocial behaviour is a mediating path from SDO to subjective well-being in Chinese adolescents. We also used multi-group analyses to test whether the relationships among SDO, prosocial behaviour, and subjective well-being differ between boys and girls. Previous studies suggested that males hold relatively higher SDO than females (Sugiura, Mifune, Tsuboi, & Yokota, 2017); however, little else is known about how gender affects these outcomes. We proposed that: (a) SDO would be negatively associated with prosocial behaviour and with subjective well-being; (b) prosocial behaviour would be positively associated with subjective well-being; (c) prosocial behaviour would mediate the negative relationship between SDO and subjective well-being.

METHOD

Participants and procedures

Adolescents between the ages of 11 and 16 were recruited from 18 public middle schools in different districts of Beijing. The investigators explained the study purpose to the principals of the target schools and obtained school approval. All adolescents participating in the study provided their parental informed consent. The data of 4246 adolescents (51% boys; $M_{age} = 12.94$ years, $SD = .94$) from grade 7 ($N = 1984$, $M_{age} = 12.34$ years, $SD = .74$), grade 8 ($N = 1843$, $M_{age} = 13.40$ years, $SD = .72$), grade 9 ($N = 419$, $M_{age} = 13.77$ years, $SD = .82$) were used for analysis. Participants also reported the family monthly income and parental education level.[1] These demographic variables were controlled for in this study.

Measures

Social dominance orientation

SDO was measured through the 16-item Social Dominance Orientation Scale (Pratto et al., 1994), which was a well-validated and widely used measure of SDO (e.g., Nicol & Rounding, 2013). Participants were asked to indicate their agreement with each item (e.g., "To get ahead in life, it's sometimes necessary to step on other groups") on a 6-point Likert scale, ranging from 1 (*totally disagree*) to 6 (*totally agree*). A higher average score indicated a higher level of SDO. In this study, the Cronbach's α coefficient was .76.

Prosocial behaviour

Prosocial behaviour was measured through the 15-item modified Prosocial Behaviour Scale for Adolescents (PBSA; Yang, Zhang, & Kou, 2017), which has been demonstrated to be a reliable and valid measure in assessing Chinese adolescents' prosocial behaviour (Yang et al., 2016). PBSA consists of four dimensions: altruism (four items; e.g., "I help my classmates play basketball"), commonweal-rule (five items; e.g., "I like participating in social activities for public good"), interpersonal relationship (three items; e.g., "I would like to invite other bystanders to join in our games") and personality trait (three items; e.g., "I keep a promise to friends"). Participants were asked to rate each item from 1 (*Definitely does not apply to me*)

[1] Family monthly income: 4.20% were below 2000 RMB, 32.60% were between 2000 and 5000 RMB, 36.20% were between 5001 and 10,000 RMB, 18.30% were between 10,001 and 20,000 RMB, 8.70% were above 20,000 RMB (1 RMB was approximately equivalent to 0.16 dollar when the survey was conducted); Father education level: 28.0% were junior high school or lower, 33.8% were senior high school, 15.8% were junior college, 15.9% were undergraduate and 6.5% were postgraduate; Mother educational level: 32.5% were junior high school or lower, 32.0% were senior high school, 16.5% were junior college, 15.0% were undergraduate and 4.0% were postgraduate.

© 2018 International Union of Psychological Science

to 7 (*Definitely applies to me*) on the Likert scale. A higher average score indicated a higher level of prosocial behaviour. The Cronbach's α coefficient of the 15 items was .89.

Subjective well-being

Adolescents' subjective well-being was measured by the 9-item Index of Well-Being (IWB; Campbell, Converse, & Rodgers, 1976). Previous study has shown that IWB is a reliable and valid measure of subjective well-being among Chinese adolescents (Shi, Zhang, Yang, Feng, & Kou, 2016). The IWB consists of two parts: the Index of General Affect and the Index of Life Satisfaction. The Index of General Affect was composed of eight items in semantic differential format as the opposite poles of 7-point scales (e.g., unhappy and happy). The Life Satisfaction index contained a single item that asks participants to rate this item ranging from 1 (completely dissatisfied) to 7 (completely satisfied). A higher average score indicated a higher level of subjective well-being. The Cronbach's α coefficient of the nine items was .91.

Data analysis

SPSS 20.0 was used to calculate descriptive statistics and correlations of key variables. Structural equation modelling (SEM) procedures using Mplus 7.0 with maximum likelihood estimation were employed for key hypotheses tests. In the SEM, we created three parcels as indicators for a latent variable of SDO with the item-to-construct balance technique (Little, Cunningham, Shahar, & Widaman, 2002). Also, the four subscale-scores of the PBSA were used as four observed indicators for a latent variable of prosocial behaviour. General affect and life satisfaction were used as two observed indicators for a latent variable of subjective well-being. The goodness of fit of the model was evaluated by the following indices: the comparative fit index (CFI: acceptable if above .90), the TuckereLewis index (TLI: acceptable if above .90), the root mean square error of approximation (RMSEA; acceptable if below .08), and the standardised root mean square residual (SRMR; acceptable if below .08) (Hu & Bentler, 1999).

The mediating effect of prosocial behaviour was tested for significance using the accelerated-bias-corrected bootstrap estimation procedure, which yields the most accurate confidence intervals (CIs) for the indirect effects. In the procedure, the given sample size was randomly resampled 5000 times with replacement, and then 5000 estimations of the indirect effect were calculated. When the 95% CI for an indirect effect did not include zero, the indirect effect was significant.

TABLE 1
Descriptive statistics and bivariate correlations for key variables

Variables	*M*	*SD*	*1*	*2*	*3*
1. SDO	2.51	0.67	—		
2. Prosocial behaviour	5.66	0.93	$-.26^{***}$	—	
3. Subjective well-being	5.27	1.17	$-.19^{***}$	$.44^{***}$	—

SDO = social dominance orientation.
$^{***}p < .001$.

RESULTS

Preliminary analyses

Table 1 presents the descriptive statistics and the bivariate correlations for all the key variables. As expected, SDO was negatively correlated with prosocial behaviour and subjective well-being, and prosocial behaviour was positively correlated with subjective well-being (all p's $< .001$).

Measurement model

The measurement model for three latent variables (SDO, prosocial behaviour and subjective well-being) was tested, and the result revealed a good fit to the data: (χ^2 (24) = 188.09, $p < .001$, CFI = .99, TLI = .99, RMSEA = .04, SRMR = .03). All the standardised factor loadings for the indicators on the latent variables were statistically significant (λ ranging from .72 to .94, p's $< .001$), signifying that the three latent variables were well represented by their respective indicators. Given the adequacy of the measurement model, the structural model was next examined.

Structural model

Structural model was estimated modelling SDO as a predictor, prosocial behaviour as a mediator and subjective well-being as an outcome variable. Age, gender, family monthly income and parental educational levels were included as control variables in the model. The result suggested good fit to the data: χ^2 (59) = 524.99, $p < .001$, CFI = .97, TLI = .96, RMSEA = .04, SRMR = .03.

As hypothesised (Figure 1), the total effect of SDO on subjective well-being in the absence of the prosocial behaviour was significant ($\beta = -.23$, $p < .001$). SDO negatively predicted prosocial behaviour ($\beta = -.33$, $p < .001$), and prosocial behaviour positively predicted subjective well-being ($\beta = .46$, $p < .001$). Moreover, the indirect effect of prosocial behaviour was significant (indirect effect = −.15, $p < .001$, 95% CI = [−.18, −.13]), suggesting that prosocial behaviour mediated the relationship between SDO and subjective well-being. After accounting for the mediating effect of prosocial behaviour, the direct effect of SDO on subjective

© 2018 International Union of Psychological Science

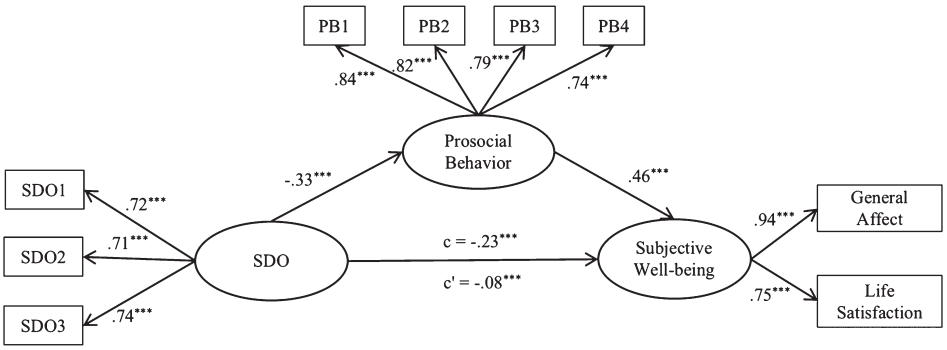

Figure 1. The structural equation model. Note: Standardised coefficients are reported. $^{***}p < .001$. Control variables are not shown in figure for parsimony. SDO1-SDO3 = three parcels of social dominance orientation; PB1-PB4 = four dimensions of prosocial behaviour; c′ = direct effect; c = total effect.

well-being was decreased to $\beta = -.08$ ($p < .001$). The mediating effect reached .66 according to the calculation of expression indirect effect/total effect, indicating that the mediation effect of prosocial behaviour explained 66% of the relationship between SDO and subjective well-being. Besides, we also ran the model without control variables, and the main results remain unchanged.

To examine whether four facets of prosocial behaviour were associated with SDO and subjective well-being in the same way, we further conducted four separate models including four dimensions of prosocial behaviour as the mediator, respectively. The results showed that each dimension mediated the negative relationship between SDO and subjective well-being respectively (altruism: indirect effect = −.09, $p < .001$, 95% CI = (−.11, −.08); commonweal-rule: indirect effect = −.11, $p < .001$, 95% CI = (−.13, −.10); interpersonal relationship: indirect effect = −.09, $p < .001$, 95% CI = (−.11, −.08); personality trait: indirect effect = −.08, $p < .001$, 95% CI = (−.09, −.07).

Gender differences

We observed no significant gender difference in subjective well-being ($M_{boys} = 5.25$; $M_{girls} = 5.29$; $t = -1.05$, $df = 4244$, $p = .29$). Boys scored higher on SDO ($M_{boys} = 2.57$; $M_{girls} = 2.44$; $t = 6.60$, $df = 4244$, $p < .001$), but lower on prosocial behaviour than girls ($M_{boys} = 5.57$; $M_{girls} = 5.74$; $t = -5.98$, $df = 4244$, $p < .001$). We used multi-group models to test whether the path coefficients differ across genders. We compared the first model, freeing the paths to vary across genders, with a second model, constraining the structural paths across genders to be equal. The result showed marginally significant χ^2 differences between the two models, $\Delta\chi^2$ (3) = 7.36, $p = .06$. Then, we used the Wald's test to examine whether each path coefficient differed across gender. The results showed that the negative relationship between SDO and prosocial behaviour was stronger in girls ($\beta = -.36$, $p < .001$) than in boys ($\beta = -.31$, $p < .001$; Wald's statistic: χ^2 (1) = 6.66, $p < .01$). There was no significant gender difference in the relationship between SDO and subjective well-being (Wald's statistic: χ^2 (1) = 0.11, $p = .74$) or between prosocial behaviour and subjective well-being (Wald's statistic: χ^2 (1) = 0.91, $p = .34$).

DISCUSSION

Numerous studies have provided strong evidence that SDO is associated with negative social consequences, but fewer studies have examined the association of SDO with the negative individual consequence of reduced subjective well-being, especially within adolescents, and especially within non-western samples. Based on recent theories and findings within positive psychology, we posited and found that SDO was negatively associated with prosocial behaviour and subjective well-being, and prosocial behaviour was positively associated with subjective well-being within our Chinese adolescent sample. Moreover, in line with the sustainable happiness model (Lyubomirsky et al., 2005), prosocial behaviour emerged as a strong mediator underlying the negative relationship between SDO and subjective well-being.

SDO and subjective well-being

Unlike a previous meta-analysis based on western countries reporting no significant association between SDO and subjective well-being (Onraet et al., 2013), we observed a negative impact of SDO on subjective well-being, using a relatively large Chinese adolescent sample. These findings were in line with value-environment fit theory, which suggests that individuals will enjoy higher satisfaction and better psychological adjustment when personal values are congruent with those prevailing values in environmental context (Sagiv & Schwartz, 2000). Given the fact that

© 2018 International Union of Psychological Science

egalitarianism and harmonious cooperation instead of personal competition and wining are highly normative in Chinese culture and school education (Liang, 2016; Oyserman et al., 2002), Chinese adolescents who demonstrate high dominant and competitive attitude in daily life might be not accordant with the cultural values and social expectation, which might generate teacher–student and peer conflicts, and thereby might undermine the sense of support and well-being (Armsden & Greenberg, 1987). We postulate that cultural differences could exist in the impact of SDO on subjective well-being, and studies in more diverse samples are needed to address this possibility. Future meta-analysis could consider culture values as potential moderators in discussing the association between SDO and subjective well-being. Besides, future studies could directly test cultural orientations (i.e., collectivism vs. individualism) at the individual level, and examine whether individual's identification as a member of a collectivistic culture would moderate the relationship between SDO and subjective well-being.

The mediating role of prosocial behaviour between SDO and subjective well-being

Another novel finding of this study was that prosocial behaviour partially mediated the negative relationship between SDO and subjective well-being. High SDO individuals tend to view the world as a "competitive jungle" (Duckitt & Sibley, 2010), and maintain stronger motivation to obtain and reinforce high status in interpersonal relationships (Pratto et al., 1994). Therefore, adolescents with higher SDO might express less prosocial emotion (i.e., empathy) (Nicol & Rounding, 2013), and perform less prosocial behaviour (Freeman et al., 2009; Halkjelsvik & Rise, 2014). On the other hand, prosocial behaviour enhances adolescents' social competence (Caprara et al., 2014) and satisfies psychological needs (Jiang et al., 2016), which, in turn, are associated with higher subjective well-being (e.g., Yang et al., 2016). That is, less prosocial behaviour provides an underlying mechanism that explains why Chinese adolescents with higher SDO experience lower levels of subjective well-being.

It is noteworthy that previous studies found that prosocial behaviour could be considered as a strategy for adolescents to control resources in order to accomplish social dominance (Hawley, 2002). High SDO adolescents might perform more such manipulative prosocial behaviour, which could undermine the negative relationship between SDO and prosocial behaviour. A recent study has identified that prosocial behaviour could be distinguished as different sub-types that reflect distinct underlying motives (i.e., altruistically motivated, norm motivated, strategically motivated) (Böckler, Tusche, & Singer, 2016). In this study, we found four facets of prosocial behaviour behave in the same way in the meditation models. Since our measures of prosocial behaviour were all altruistically intended behaviour (Yang et al., 2017), and did not tap into other different motives (e.g., strategic motive), we call for future research to utilise diverse measures of prosocial behaviour, which can reveal the distinguished roles of differently motivated behaviours respectively.

Regarding gender differences, we observed that that boys scored higher on SDO than girls, which was accordant with previous studies in adult populations (e.g., Sugiura et al., 2017). This might be because males tend to occupy more resources and obtain higher status than female through the evolutionary process (Sugiura et al., 2017). Also, consistent with abundant evidence (e.g., Eisenberg, Fabes, & Spinrad, 2006), we found that girls scored higher on prosocial behaviour than boys, which might be because girls are socialised to empathise more with others' needs and perform more prosocial behaviour when compared with boys (Eisenberg et al., 2006). Moreover, the multi-group analysis demonstrated that the mediation model was generally similar between boys and girls, except that the negative relationship between SDO and prosocial behaviour was relatively stronger among girls than boys. One possible explanation is that girls are known to mature faster, and are socialised towards friends and others earlier than boys (Crockett, Losoff, & Petersen, 1984). Therefore, SDO may exert a relatively stronger impact on girls' prosocial behaviour than boys. Future research may further test the relationship between SDO and prosocial behaviour in elder adolescents or adult samples.

Limitations and implications

Some limitations of this study should be noted. First, although we had a large sample size, all the adolescents were recruited only from Beijing. Future studies based on other samples, not only in China but also in other Asian countries as well as western countries, are necessary to extend the generalisability of the present findings. Second, this study employed self-report measures, which might be susceptible to bias (e.g., social desirability). Efforts should be made to use multiple methods for evaluation to reduce the impact of such bias. Third, this study was cross-sectional in design. Although we applied structural equation model techniques to test a plausible causal sequence, our study could not actually establish causality. Longitudinal studies are needed to fully test the temporal directionality of the relations among SDO, prosocial behaviour and subjective well-being. Also, experimental approaches could be used to validate the causal effect of SDO on subjective well-being, as well as to validate the mediating role of prosocial behaviour. For example, future research can manipulate or conduct intervention on adolescents' prosocial behaviour, and examine whether the negative association between SDO and subjective

© 2018 International Union of Psychological Science

well-being still holds. Forth, our results suggested that prosocial behaviour was only a partial mediator, indicating that there might be other mediating factors (e.g., antisocial behaviour or extrinsic goals) that remain to be further explored. Finally, although we used a well-validated measure of SDO, we noticed that the α coefficient for the SDO scale was acceptable but did not reach an excellent standard. Cross-cultural studies might be needed to further test the cultural equivalence of the measure of SDO.

Despite the limitations above, this study sheds light on how SDO is associated with adolescents' subjective well-being and the underlying mechanisms. Moreover, this study has potential implications for the design of interventions targeted at adolescents. Given the negative impact of SDO on prosocial behaviour and subjective well-being, parents and teachers should take steps to decrease adolescents' SDO, for example, by cultivating their egalitarian values, which could thereby enhance adolescents' subjective well-being.

ACKNOWLEDGEMENTS

This research was supported by the MOE Project of Key Research Institutes of Humanities and Social Science at Universities (16JJD880007), the Project of Chinese Positive Psychology Research (No. 00203442015-01-005), the Project of Beijing Municipal Commission of Education (PXM2014_014202_07_000067), the National Natural Science Foundation of China (31571145), and the Russian Academic Excellence Project '5-100'. Ying Yang conceived and designed this study, analysed the data and wrote the manuscript; Wenqi Li designed this study, collected data and revised the manuscript critically; Kennon M. Sheldon revised the manuscript critically; Yu Kou designed the study and revised the manuscript critically.

Manuscript received April 2017
Revised manuscript accepted December 2017
First published online January 2018

REFERENCES

Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, *16*(5), 427–454.

Böckler, A., Tusche, A., & Singer, T. (2016). The structure of human prosociality: Differentiating altruistically motivated, norm motivated, strategically motivated, and self-reported prosocial behavior. *Social Psychological and Personality Science*, *7*(6), 530–541.

Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life: Perceptions, evaluations, and satisfactions*. New York, NY: Russell Sage Foundation.

Caprara, G. V., Kanacri, B. P. L., Gerbino, M., Zuffianò, A., Alessandri, G., Vecchio, G., … Bridglall, B. (2014). Positive effects of promoting prosocial behavior in early adolescence: Evidence from a school-based intervention. *International Journal of Behavioral Development*, *38*(4), 386–396.

Crocker, J. (2008). From egosystem to ecosystem: Implications for learning, relationships, and well-being. In H. Wayment & J. Brauer (Eds.), *Transcending self-interest: Psychological explorations of the quiet ego*. Washington, DC: American Psychological Association.

Crockett, L., Losoff, M., & Petersen, A. C. (1984). Perceptions of the peer group and friendship in early adolescence. *The Journal of Early Adolescence*, *4*(2), 155–181.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*, 542–575.

Duckitt, J., & Sibley, C. G. (2010). Personality, ideology, prejudice, and politics: A dual-process motivational model. *Journal of Personality*, *78*(6), 1861–1894.

Duriez, B., Vansteenkiste, M., Soenens, B., & De Witte, H. (2007). The social costs of extrinsic relative to intrinsic goal pursuits: Their relation with social dominance and racial and ethnic prejudice. *Journal of Personality*, *75*(4), 757–782.

Eisenberg, N., Fabes, R. A., & Spinrad, T. L. (2006). Prosocial development. In W. Damon, R. M. Lerner, & N. Eisenberg (Eds.), *Handbook of child psychology, Vol. 3: Social, emotional, and personality development*. (6th ed., pp. 646–718). New York, NY: Wiley.

Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society of London Series B Biological Sciences*, *359*, 1367–1378.

Freeman, D., Aquino, K., & McFerran, B. (2009). Overcoming beneficiary race as an impediment to charitable donations: Social dominance orientation, the experience of moral elevation, and donation behavior. *Personality and Social Psychology Bulletin*, *35*(1), 72–84.

Halkjelsvik, T., & Rise, J. (2014). Social dominance orientation, right-wing authoritarianism, and willingness to help addicted individuals: The role of responsibility judgments. *Europe's Journal of Psychology*, *10*(1), 27–40.

Hawley, P. H. (2002). Social dominance and prosocial and coercive strategies of resource control in preschoolers. *International Journal of Behavioral Development*, *26*(2), 167–176.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55.

Jiang, J., Zeng, T., Zhang, C., & Wang, R. (2016). The mediating role of relatedness need satisfaction in the relationship between charitable behavior and well-being: Empirical evidence from China. *International Journal of Psychology*. https://doi.org/10.1002/ijop.12377

Liang, J. (2016). A revisit of 'moral and character education' subject in junior-high school in China. *China Journal of Social Work*, *9*(2), 103–111.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, *9*(2), 151–173.

Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology*, *9*(2), 111–131.

© 2018 International Union of Psychological Science

Nicol, A. A., & Rounding, K. (2013). Alienation and empathy as mediators of the relation between social dominance orientation, right-wing authoritarianism and expressions of racism and sexism. *Personality and Individual Differences*, *55*(3), 294–299.

Onraet, E., Van Hiel, A., & Dhont, K. (2013). The relationship between right-wing ideological attitudes and psychological well-being. *Personality and Social Psychology Bulletin*, *39*(4), 509–522.

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, *128*(1), 3–72.

Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, *67*(4), 741–763.

Sagiv, L., & Schwartz, S. H. (2000). Value priorities and subjective well-being: Direct relations and congruity effects. *European Journal of Social Psychology*, *30*(2), 177–198.

Shi, J., Zhang, M., Yang, Y., Feng, J., & Kou, Y. (2016). Celebrity worship and its relationship with aspirations and subjective well-being of junior middle school students: The moderating effect of gender. *Psychological Development and Education*, *32*(6), 666–674.

Sugiura, H., Mifune, N., Tsuboi, S., & Yokota, K. (2017). Gender differences in intergroup conflict: The effect of outgroup threat priming on social dominance orientation. *Personality and Individual Differences*, *104*, 262–265.

Tian, L., Du, M., & Huebner, E. S. (2015). The effect of gratitude on elementary school students' subjective well-being in schools: The mediating role of prosocial behavior. *Social Indicators Research*, *122*(3), 887–904.

Wölfer, R., Schmid, K., Hewstone, M., & van Zalk, M. (2016). Developmental dynamics of intergroup contact and intergroup attitudes: Long-term effects in adolescence and early adulthood. *Child Development*, *87*, 1466–1478.

Yang, Y., Li, P., Fu, X., & Kou, Y. (2017). Orientations to happiness and subjective well-being in Chinese adolescents: The roles of prosocial behavior and internet addictive behavior. *Journal of Happiness Studies*, *18*(6), 1747–1762.

Yang, Y., Zhang, M., & Kou, Y. (2016). The revalidation and development of the prosocial behavior scale for adolescent. *Chinese Social Psychological Review*, *10*, 135–150.

© 2018 International Union of Psychological Science